Notice of Allowability	Application No.	Applicant(s)	
	09/868,987	MURDIN ET AL.	
	Examiner	Art Unit	
	Padmavathi v. Baskar	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *4/20/07*.

2. ☒ The allowed claim(s) is/are *84 -101 and have been renumbered as 1-18 respectively.*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *6/22/07* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/20/07 has been entered.

2. Applicant's amendment filed on 1/18/ 07 is acknowledged and entered.

Status of Claims

3. Claims 1-83 have been canceled

New claims 84-101 have been added and are currently pending.

Examiner's amendment

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thuy Huong Nguyen (Reg. No. 47,336) on 6/22/07 (see attached interview summary). The application has been amended as follows:

Claim 86. (currently amended) An isolated nucleic acid molecule which is ~~anti-sense~~ fully complementary to the nucleic acid molecule of claim 84

Claim 101. (currently amended) A method for preventing or treating *Chlamydia pneumoniae* infection comprising administering to a patient an effective amount of:

(a) the nucleic acid according to claim 84;

(b) a vaccine vector wherein the vaccine vector comprises the nucleic acid according to claim 84; or

(c) a pharmaceutical composition comprising the nucleic acid according to claim 84 and a pharmaceutically acceptable carrier; ~~or~~

~~(d) the polypeptide encoded by the nucleic acid according to claim 84 in the reading frame set forth in SEQ ID N0:14~~.

5. In view of new claims and amendment of record, the previous rejections of record are withdrawn.

6. The claims 84-101 as presented now define a novel isolated nucleic acid which encodes the recombinant CPNI00686 RY 54 polypeptide, SEQ.ID.NO14 which is a putative 98 kDa outer

membrane protein of *C.pneumoniae*. The claimed subject mater is neither disclosed nor taught by the prior art as the claims now are drawn to an isolated nucleic acid molecule which encodes the polypeptide SEQ.ID.NO: 14, vaccine vector comprising said nucleic acid, vaccine comprising said nucleic acid and a method of preventing or treating chlamydia pneumoniae using said nucleic acid.

7. Claims 84 -101 are allowed and have been renumbered as 1-18 respectively.

8. Papers related to this application may be submitted to Group 1600, AU 1645 by facsimile transmission. Papers should be transmitted via the PTO Fax Center, which receives transmissions 24 hours a day and 7 days a week. The transmission of such papers by facsimile must conform to the notice published in the Official Gazette, 1096 OG 30, November 15, 1989. The Right Fax number is 571-273-8300.

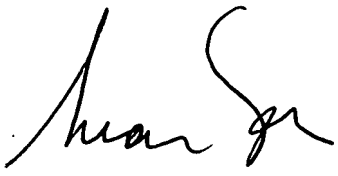
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PMR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PMR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Padma Baskar Ph.D., whose telephone number is ((571) 272-0853. A message may be left on the Examiner's voice mail system. The Examiner can normally be reached on Monday to Friday from 6.30 a.m. to 4.00 p.m. except First Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Siew can be reached on (571) 272-0787. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600

Padma Baskar Ph.D.

SUSAN UNGAR, PH.D
PRIMARY EXAMINER



CLEAN COPY OF CLAIMS

Claim 84. An isolated nucleic acid molecule which encodes the polypeptide SEQ ID NO: 14.
Claim 85. An isolated nucleic acid molecule comprising the nucleic acid sequence SEQ ID No: 1.
Claim 86. An isolated nucleic acid molecule which is fully complementary to the nucleic acid molecule of claim 84.
Claim 87. An isolated nucleic acid molecule which encodes a fusion protein, said fusion protein comprising the polypeptide encoded by the nucleic acid molecule of claim 84 and a second polypeptide.
Claim 88. The nucleic acid molecule of claim 87 wherein the second polypeptide is a heterologous signal peptide.
Claim 89. The nucleic acid molecule of claim 87 wherein the second polypeptide has adjuvant activity.
Claim 90. The nucleic acid molecule of claim 84, operably linked to one or more expression control sequences.
Claim 91. A vaccine vector comprising the nucleic acid sequence selected from any one of"
(i) SEQ ID No: 1; or
(ii) a nucleic acid sequence which encodes the polypeptide of SEQ ID N0:14; wherein the nucleic acid sequence is capable of being expressed.

Claim 92. The vaccine vector of claim 91 comprising a hybrid gene, wherein the hybrid gene encodes a fusion polypeptide, wherein the fusion polypeptide comprises the polypeptide of
SEQ ID No:14; and
a heterologous polypeptide;
wherein the hybrid gene is capable of being expressed.
Claim 93. The vaccine vector of claim 92 wherein the second polypeptide is a heterologous signal peptide.
Claim 94. The vaccine vector of claim 92 wherein the second polypeptide has adjuvant activity.
Claim 95. The vaccine vector of claim 91 wherein the nucleic acid is operably linked to one or more expression control sequences.
Claim 96. The vaccine vector of claim 91 wherein the polypeptide-encoding nucleic acid is the first nucleic acid, and wherein the vaccine vector further comprises a second nucleic acid encoding an additional polypeptide which enhances the immune response to the polypeptide expressed by said first nucleic acid.
Claim 97. The vaccine vector of claim 96 wherein the additional polypeptide is a *Chlamydia* polypeptide.
Claim 98. A pharmaceutical composition comprising the nucleic acid according to claim 84 and a pharmaceutically acceptable carrier.
Claim 99. A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent, and a nucleic acid molecule which encodes the polypeptide of SEQ ID NO: 14; wherein the nucleic acid is capable of being expressed.
Claim 100. A unicellular host transformed with the nucleic acid molecule of claim 90.

Claim 101. A method for preventing or treating *Chlamydia pneumoniae* infection comprising administering to a patient an effective amount of:
(a) the nucleic acid according to claim 84;
(b) a vaccine vector wherein the vaccine vector comprises the nucleic acid according to claim 84; or
(c) a pharmaceutical composition comprising the nucleic acid according to claim 84 and a pharmaceutically acceptable carrier.